15. (Twice Amended) The method of claim 13, whereby administration of the PYY agonist causes the islet or cell to produce insulin when treated with glucose.

16. The method of claim 13, wherein the islet is a fetal islet.

17. The method of claim 13, wherein the cell is a fetal pancreatic cell.

18. The method of claim 13, wherein the islet is a postpartem islet.

19. The method of claim 13, wherein the cell is a postpartem cell.

20. (Amended) The method of claim 13, wherein the cell is a pancreatic β cell.

21. (Twice Amended) A method for altering glucose metabolism in an animal identified as having a disease associated with abnormal glucose metabolism, comprising administering to the animal an amount of a composition including a PYY agonist, wherein the amount is therapeutically effective to induce or enhance glucose responsiveness in the animal, thereby altering glucose metabolism in the animal.

22. (Amended) The method of claim 21, wherein said PYY agonist induces or enhances the glucose responsiveness of a pancreatic islet or cell.

23. (Twice Amended) A method for treating a disease associated with altered glucose metabolism, comprising administering to an animal identified as having a disease associated with altered glucose metabolism an amount of a composition comprising a PYY agonist, wherein the amount is sufficient to increase the glucose responsiveness of a pancreatic islet or cell in the animal.

25. (Amended) A method for treating a disease associated with altered glucose metabolism, comprising administering to an animal an amount of a composition comprising glucose responsive islets or cells obtained by the method of claim 13, 14, 15, 17, 19 or 20, wherein the amount is therapeutically effective to induce or enhance glucose responsiveness in the animal.

26. (Amended) The method of claim 25, wherein said composition further comprises a PYY agonist.

27. (Amended) The method of claim 26, wherein said composition is conjointly administered either simultaneously, sequentially or separately with a PYY agonist.

28. (Twice Amended) The method of claim 23, wherein said disease is associated with a condition selected from insulin resistance, glucose intolerance or glucose non-responsiveness, hyperglycemia, obesity, hyperlipidemia and hyperlipoproteinemia in a subject.

29. (Amended) The method of claim 23, wherein said disease is Type II diabetes mellitus (NIDD).

30. (Twice Amended) The method of any one of claims 13-20, wherein said PYY agonist is administered together with a dipeptidylpeptidase inhibitor, insulin, or GLP-1.

31. (Twice Amended) The method of any one of claims 13-20, wherein said PYY agonist is conjointly administered either simultaneously, sequentially, or separately with a dipeptidylpeptidase inhibitor, insulin, or GLP-1.

32. (Amended) The method of claim 30, wherein said dipeptidylpeptidase is DPIV.

33. (Twice Amended) A method for maintaining or restoring a function of pancreatic β cells, comprising:

administering to a pancreatic islet or cell a composition comprising a PYY agonist, thereby maintaining or restoring a function of pancreatic β cells.

34. (Twice Amended) The method of any one of claims 13-20, wherein said agonist is a small organic molecule.

35. (Twice Amended) The method of any one of claims 13-20, wherein said composition further comprises an agent capable of inhibiting the degradation of a PYY agonist.

36. (Twice Amended) The method of any one of claims 13-20, further comprising administering to an animal an agent capable of inhibiting the degradation of a PYY agonist either simultaneously, sequentially or separately with said PYY agonist.

37. (Amended) The method of claim 34, wherein said agent is co-administered with the PYY agonist.

39. (Twice Amended) The method of any of claims 13-20, wherein said PYY agonist enhances or recovers glucose responsiveness.

45. (Twice Amended) A method for maintaining or restoring normal pancreatic islet function, comprising administering to a cultured pancreatic islet or cell a PYY agonist, thereby maintaining or restoring normal pancreatic islet function.

46. The method of claim 45, where in said pancreatic islet is a failing β cell.

50. (Amended) The method of claim 21, wherein said animal is a human.

51. (Amended) A method of claim 13, wherein administering the PYY agonist causes maturation of said pancreatic islet or cell.

52. A method of claim 13, wherein said pancreatic islet or cell is a stem cell.

53. The method of claim 17, wherein the cell is a pancreatic β cell.

54. The method of claim 19, wherein the cell is a pancreatic β cell.

55. The method of claim 25, wherein said disease is associated with a condition selected from insulin resistance, glucose intolerance or glucose non-responsiveness, hyperglycemia, obesity, hyperlipidemia and hyperlipoproteinemia in a subject.

56. The method of claim 25, wherein said disease is Type II diabetes mellitus (NIDD).

57. The method of claim 21, wherein said composition further comprises a dipeptidylpeptidase inhibitor, insulin or GLP-1.

58. The method of claim 21, wherein said composition is conjointly administered either simultaneously, sequentially or separately with a dipeptidylpeptidase inhibitor, insulin or GLP-1.

59. The method of claim 23, wherein said composition further comprises a dipeptidylpeptidase inhibitor, insulin or GLP-1.

60. The method of claim 23, wherein said composition is conjointly administered either simultaneously, sequentially or separately with a dipeptidylpeptidase inhibitor, insulin or GLP-1.

61. The method of claim 25, wherein said composition further comprises a dipeptidylpeptidase inhibitor, insulin or GLP-1.

62. The method of claim 25, wherein said composition is conjointly administered either simultaneously, sequentially or separately with a dipeptidylpeptidase inhibitor, insulin or GLP-1.

63. The method of claim 31, wherein said dipeptidylpeptidase is DPIV.

64. (Amended) The method of claim 33, wherein said agonist is a small organic molecule.

65. (Amended) The method of claim 33, wherein said composition further comprises an agent capable of inhibiting the degradation of a PYY agonist.

66. (Amended) The method of claim 33, further comprising administering to an animal an agent capable of inhibiting the degradation of a PYY agonist either simultaneously, sequentially or separately with said PYY agonist.

67. (Amended) The method of claim 66, wherein said agent is co-administered with the PYY agonist.

68. (Amended) The method of claim 21, wherein said agonist is a small organic molecule.

69. (Amended) The method of claim 21, wherein said composition further comprises an agent capable of inhibiting the degradation of a PYY agonist.

70. (Amended) The method of claim 21, further comprising administering to an animal an agent capable of inhibiting the degradation of a PYY agonist either simultaneously, sequentially or separately with said PYY agonist.

71. (Amended) The method of claim 70, wherein said agent is co-administered with the PYY agonist.

72. (Amended) The method of claim 23, wherein said agonist is a small organic molecule.

73. (Amended) The method of claim 23, wherein said composition further comprises an agent capable of inhibiting the degradation of a PYY agonist.

74. (Amended) The method of claim 23, further comprising administering to an animal an agent capable of inhibiting the degradation of a PYY agonist either simultaneously, sequentially or separately with said PYY agonist.

75. (Amended) The method of claim 74, wherein said agent is co-administered with the PYY agonist.

76. (Amended) The method of claim 23, wherein said PYY agonist enhances or recovers glucose responsiveness.

77. (Amended) The method of claim 21, wherein said PYY agonist enhances or recovers glucose responsiveness.

78. (Amended) The method of claim 33, wherein said PYY agonist enhances or recovers glucose responsiveness.

79. The method of claim 25, wherein the glucose responsive islets or cells produce insulin when treated with glucose.

80. The method of claim 25, wherein the islets include fetal islets.

81. The method of claim 25, wherein the cells include fetal pancreatic cells.

82. The method of claim 25, wherein the islets include postpartem islets.

83. The method of claim 25, wherein the cells include postpartem cells.

84. The method of claim 25, wherein the cells include pancreatic β cells.

D14 85. (Amended) The method of claim 23, wherein said animal is a human.

86. The method of any one of the above claims 25, wherein said animal is a human.

Please add the following new claims:

sub Fig 7 87. The method of claim 13, wherein the PYY agonist is PYY.

88. The method of claim 21, wherein the PYY agonist is PYY.

D15 89. The method of claim 23, wherein the PYY agonist is PYY.

90. The method of claim 33, wherein the PYY agonist is PYY.

91. The method of claim 45, wherein the PYY agonist is PYY.

The claims presented above incorporate changes as indicated by the marked-up versions below.

13. (Twice Amended) A method for altering the glucose-responsiveness of a pancreatic islet or cell, comprising administering to the pancreatic islet or cell a PYY agonist ~~Therapeutic~~, thereby altering the glucose-responsiveness of the pancreatic islet or cell.

15. (Twice Amended) The method of claim 13, whereby administration of the PYY agonist ~~Therapeutic~~ causes the islet or cell to produce insulin when treated with glucose.

20. (Amended) The method of claim 13, wherein the cell is a pancreatic β cell.

21. (Twice Amended) A method for altering glucose metabolism in an animal identified as having a disease associated with abnormal glucose metabolism, comprising administering to the animal an ~~therapeutically effective~~ amount of a composition including a PYY agonist ~~Therapeutic~~, wherein the amount is therapeutically effective to induce or enhance glucose responsiveness in the animal, thereby altering glucose metabolism in the animal.

22. (Amended) The method of claim 21, wherein said PYY agonist ~~Therapeutic~~ induces or enhances the glucose responsiveness of a pancreatic islet or cell.

23. (Twice Amended) A method for treating a disease associated with altered glucose metabolism, comprising administering to an animal identified as having a disease associated with altered glucose metabolism an ~~therapeutically effective~~ amount of a composition comprising a PYY agonist ~~Therapeutic~~, ~~in an~~ wherein the amount is sufficient to increase the glucose responsiveness of a pancreatic islet or cell in the animal.

25. (Amended) A method for treating a disease associated with altered glucose metabolism, comprising administering to an animal an ~~therapeutically effective~~ amount of a composition comprising glucose responsive islets or cells obtained by the method of claim 13, 14, 15, 17, 19 or 20, wherein the amount is therapeutically effective to induce or enhance glucose responsiveness in the animal.

26. (Amended) The method of claim 25, wherein said composition further comprises a PYY agonist Therapeutic.

27. (Amended) The method of claim 26, wherein said composition is conjointly administered either simultaneously, sequentially or separately with a PYY agonist ~~Therapeutic~~.

28. (Twice Amended) The method of claim 23, wherein said disease is associated with a condition selected from ~~the group consisting of~~ insulin resistance, glucose intolerance or glucose non-responsiveness, hyperglycemia, obesity, hyperlipidemia and hyperlipoproteinemia in a subject.

29. (Amended) The method of claim 23, wherein said disease is Type II diabetes mellitus (NIDD).

30. (Twice Amended) The method of any one of claims 13-20, wherein said PYY agonist ~~Therapeutic~~ is administered together with a dipeptidylpeptidase inhibitor, insulin, or GLP-1.

31. (Twice Amended) The method of any one of claims 13-20, wherein said PYY agonist ~~Therapeutic~~ is conjointly administered either simultaneously, sequentially, or separately with a dipeptidylpeptidase inhibitor, insulin, or GLP-1.

32. (Amended) The method of claim 30, wherein said dipeptidylpeptidase is DPIV.

33. (Twice Amended) A method for maintaining or restoring a function of pancreatic β cells, comprising:

administering to a pancreatic islet or cell a composition comprising a PYY agonist ~~Therapeutic~~, thereby maintaining or restoring a function of pancreatic β cells.

34. (Twice Amended) The method of any one of claims 13-20, wherein said agonist ~~therapeutic~~ is a small organic molecule.

35. (Twice Amended) The method of any one of claims 13-20, wherein said composition further comprises an agent capable of inhibiting the degradation of a PYY agonist ~~Therapeutic~~.

36. (Twice Amended) The method of any one of claims 13-20, further comprising administering to an animal an agent capable of inhibiting the degradation of a PYY agonist ~~Therapeutic~~ either simultaneously, sequentially or separately with said PYY ~~or a PYY~~ agonist.

37. (Amended) The method of claim 34, wherein said agent is co-administered with the PYY agonist ~~Therapeutic~~.

39. (Twice Amended) The method of any of claims 13-20, wherein said PYY agonist ~~Therapeutic~~ enhances or recovers glucose responsiveness.

45. (Twice Amended) A method for maintaining or restoring normal pancreatic islet function, comprising administering to a cultured pancreatic islet or cell a PYY agonist ~~Therapeutic~~, thereby maintaining or restoring normal pancreatic islet function.

50. (Amended) The method of claim 21, wherein said animal is a human.

51. (Amended) A method of claim 13, wherein administering the PYY agonist ~~Therapeutic~~ causes maturation of said pancreatic islet or cell.

64. (Amended) The method of claim 33, wherein said agonist ~~therapeutic~~ is a small organic molecule.

65. (Amended) The method of claim 33, wherein said composition further comprises an agent capable of inhibiting the degradation of a PYY agonist ~~Therapeutic~~.

66. (Amended) The method of claim 33, further comprising administering to an animal an agent capable of inhibiting the degradation of a PYY agonist ~~Therapeutic~~ either simultaneously, sequentially or separately with said PYY ~~or a PYY~~ agonist.

67. (Amended) The method of claim 66, wherein said agent is co-administered with the PYY agonist ~~Therapeutic~~.

68. (Amended) The method of claim 21, wherein said agonist ~~therapeutic~~ is a small organic molecule.

69. (Amended) The method of claim 21, wherein said composition further comprises an agent capable of inhibiting the degradation of a PYY agonist ~~Therapeutic~~.

70. (Amended) The method of claim 21, further comprising administering to an animal an agent capable of inhibiting the degradation of a PYY agonist ~~Therapeutic~~ either simultaneously, sequentially or separately with said PYY ~~or a PYY~~ agonist.

71. (Amended) The method of claim 70, wherein said agent is co-administered with the PYY agonist ~~Therapeutic~~.

72. (Amended) The method of claim 23, wherein said agonist ~~therapeutic~~ is a small organic molecule.

73. (Amended) The method of claim 23, wherein said composition further comprises an agent capable of inhibiting the degradation of a PYY agonist ~~Therapeutic~~.

74. (Amended) The method of claim 23, further comprising administering to an animal an agent capable of inhibiting the degradation of a PYY agonist ~~Therapeutic~~ either simultaneously, sequentially or separately with said PYY ~~or a PYY~~ agonist.

75. (Amended) The method of claim 74, wherein said agent is co-administered with the PYY agonist ~~Therapeutic~~.

76. (Amended) The method of claim 23, wherein said PYY agonist ~~Therapeutic~~ enhances or recovers glucose responsiveness.

77. (Amended) The method of claim 21, wherein said PYY agonist ~~Therapeutic~~ enhances or recovers glucose responsiveness.